Auto ADAPT BY
AUTO TRANSFORM
Engineered Vehicle Innovation

Driver Test Station 2

A measuring tool for analysing a person's physical driving ability.

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IN KEEPING WITH Swedish traditions of safety, Autoadapt is working to increase the safety of products designed for car adaptation. We regard it as our mission to offer disabled drivers and their passengers the same degree of safety as other road users. As an example, since May 2009 we have our own test laboratory, Autoadapt Safety Centre, which is accredited by SWEDAC to ISO/IEC 17025:2005. This is where we ensure our products have the functionality, quality and safety which we promise for them. We also have a quality system certified to ISO 9001:2008, which ensures that all our procedures are scrupulously documented throughout the whole process, from design to final inspection and testing.

The DTS has been produced in association with a number of adaptation companies and organisations. This association is extremely valuable and helps us continuously improve our product. Currently the DTS is used in both the private and public sector and contributes to an incre asing number of appropriate and safe adaptation solutions finding their way onto our roads.

SAFE VEHICLE ADAPTATION

For your safety, Autoadapt's products are designed and tested in accordance with applicable directives and standards.

SWEDAC ACKREDITERING
1976
ISO/IEC 17025

INTERTEK
ISO 9001:2008

Why a DTS?

Test a driver's strength, flexibility, behaviour and reaction time in a safe and calm environment.

THE DTS IS not a simulator but a measuring tool for conducting qualified tests of a person's physical driving ability. It is used for testing basic functions such as steering, acceleration and braking in order to ensure the driver is able to drive a vehicle safely. Using the test report generated by the DTS, subsequent analysis can be based on objective facts. It will be easier to make an accurate evaluation of the type of adaptation and car model which will be suitable, and the person being tested can feel reassured that the results have been reached objectively. The report also provides support in the event of tough decisions which might otherwise be hard to justify without an objective basis. Even if some of the measured values are low, this does not necessarily mean that the person being tested is unfit to drive a car. The challenge with vehicle adaptation lies in finding a way of enabling a person to drive despite their physical limitations. The DTS comes with several smart solutions, all of them designed to create a driver environment tailored to each driver's needs and wishes.

It is important to bear in mind that the DTS does not provide any information as to whether the person being tested has the mental qualities required of a driver. Even if the physical requirements are met, we always recommend the driver practise driving with an expert driving instructor to ensure they are suitable to drive.

STEERING WHEEL

Height and resistance-adjustable allowing it to be adapted to each driver's driving position and capacities. A correct driving position is a pre-requisite of a successful test.

ADAPTER

Steering wheel adapter for attachment of steering wheel spinner, which comes supplied. Choose from seven different models to optimise steering capacity at the wheel.

HAND CONTROLS

Wheel and floor-mounted accelerator and brake controls. These are designed to give as realistic a driving experience as possible.

The DTS is available in two versions, for right-hand and left-hand traffic. Both versions can be used with or without the 6-way base

6-WAY BASE

A 6-way base which adjusts the car seat height and reach, and swivels out, making it easier to transfer to and from a wheelchair. The transfer itself actually provides valuable information as to what type of adaptation and car model is suitable. The car seat has adjustable back, neck and armrests. To perform to their best during the test, the driver has to be sitting comfortably. The 6-way base is easy to roll out of the way if the driver wants to do the test from their own wheelchair.

WHEELS

Three retractable wheels for quick and easy removal indoors. Once the wheels are retracted the DTS is provided with a very stable and safe base.

SCREEN

A 22” screen which provides the driver with a good overview and feel for the various tests. Specially adapted for those tests which require a degree of peripheral vision.

ARMRESTS

Armrests which counteract static loads on the arms. Test both with and without an armrest to determine what the driver needs.

STAND FOR LAPTOP AND STEERING WHEEL SPINNERS

Stand for the operator’s computer and the wheel spinners, which come supplied. The positioning of the computer gives the operator a good view of the driver. Studying the driver while the test is in progress provides important information about their overall driving ability.

WHEELCHAIR ANCHORING SYSTEM

Floor-mounted attachments for anchoring the driver’s wheelchair when the 6-way base is not used. It is important for the driver to be seated in a stable and safe position during the tests.

PEDALS

Right and left accelerator pedals, and one brake pedal. Studying the flexibility of the driver’s feet and legs provides information as to whether there needs to be some level adjustment or whether hand controls would be a better option.

Analysis in three modules

Points are selected depending on the driver's physical condition.

IMPLEMENT THE TESTS when conditions are right for the person to perform to their best. Remember that factors like meals, sleep and medicines can affect the test result both negatively and positively. Study the driver while the test is in progress to obtain more information than just the values presented in the report. Note, for instance, the driver's movement in their arms and legs, as well as their ability to coordinate movements and take onboard instructions. The overall test result will give a clear picture of what adaptation and car model will be suitable. The person trained by Autoadapt on a DTS can carry out tests to assess a driver's physical adaptation requirement. If the assessment includes a driver's physical ability, knowledge in the field of therapy is also required. Bear in mind that the DTS can never act as a substitute for a test in a real driving situation. Always make sure the driver will manage to drive a proper vehicle in a safe manner.

1

Power test

Measures the strength of the driver's arms, legs, hands and feet.

This test includes six possible points where the driver's ability to use physical strength when manoeuvring the steering wheel, controls and pedals can be measured. At these points, the driver must twist, push and pull with all his/her strength. This will clearly determine how much strength and mobility the driver has.

2

Timer test

Measures the driver's braking response time.

This test includes three possible points where the driver's ability to brake using his/her hands and feet can be measured. At these points, the driver must accelerate up to a pre-determined value and then apply the brakes as quickly as possible. This will clearly determine the driver's level of stability and endurance.

3

Reaction test

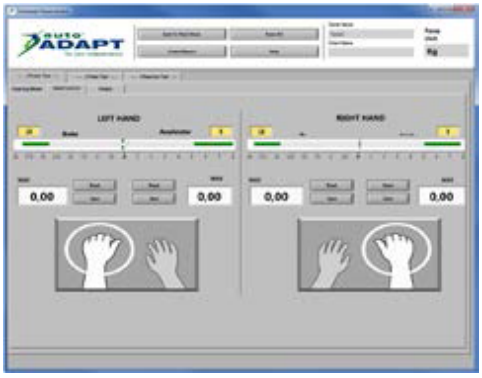
Measures the driver's reaction time.

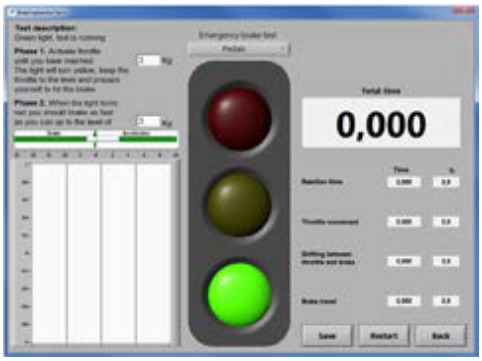
This test includes two possible points where the driver's total reaction time can be measured. At these points, the driver must carry out the instructions that pop up randomly on the screen. This will clearly determine the driver's capacity to perceive and process information.

Software

Easy to use and understand.

Our software, which is needed to use the DTS, comes free of charge and is easy to use and understand. To ensure stable operation of the DTS, a computer should be dedicated for the purpose and the software installed on an empty hard drive. The software requires Windows XP or later version.





What our users say

Comments from real life.

I assess driving ability for people with physical and/or cognitive disabilites. I use the DTS daily and find it most useful for assessing clients' reaction times, range of movement in upper limbs for steering and also for demonstrating some of the adaptations that are available to people. It is easy to use and a really valuable screening tool for our practical and on road driving assessments which provides us and the clients with instant feedback.

– Yvette Bateman
Senior Occupational Therapist, East Anglian DriveAbility
Great Britain

EAST ANGLIAN DRIVEABILITY
Your key to independent mobility

Since 2010, Felitec has been using the Driver Test Station to measure drivers' strength and reaction times. Thus, as a measurement tool, the DTS has become an integral part of vehicle adaptation. Nowadays, driving licence inspectors, doctors and driving schools in Felitec's region are demanding that this test be conducted as a necessary basis for decision-making when assessing a person's driving ability. Throughout Germany, licensing authorities and parties responsible for adaptation costs are using the test report as a basis for decision-making. To determine the basic data for strength and reaction times, a research project was conducted at the institute of technology in Essen where participants were divided into groups according to driving ability and age.

– Felix Liehr
Owner and CEO, Felitec
Germany

FeLiTEC
Fahrzeugtechnik die Menschen bewegt

At Autohuset Vestergaard A/S, Handicap og Buscenter, we rely on DTS to let us service our customers with accurate measurements for car adaptions. We offer and sell this service to a large number of local authorities in Denmark, authorities that want to make sure their citizens have the appropriate help when concerning servo steering, break and reaction while driving. The DTS is operated by our occupational therapist, and the test is always followed by a result report. We have only had positive reactions and feedback since implementing this equipment in 2010.

– Dorte Falkenberg
Occupational Therapist, Autohuset Vestergaard A/S
Denmark

AUTOHUSET VESTERGAARD
viden om køretøjer

We are proud to be able to offer one of the best tools on the market for evaluating a driver's abilities and optimising the requirements for a fully customised car. By measuring the driver's ability to apply force, move their arms and legs and react quickly, we will have a considerably improved and more reliable basis on which to plan a car adaptation or a driving licence case. The evaluation is based on fact and the person tested can rest assured that the test is performed in an objective manner.

– Lars-Åke Johansson
Owner and CEO, Bilinredarna i Växjö AB
Board member of the Swedish Association of Vehicle Adaptation
Sweden

Car adaptation is not common in Japan and therefore not many people realize they can drive with reduced or limited mobility. The DTS is the door opener for those who think they never can drive a car again.

– Kazuki Kori
DTS technical trainer, Office Shimizu
Japan

I think the DTS is a very important tool to make correct judgments before an adaptation. The rig gives you and the end user valuable information about both the choice of adaptation and which car type that is most suitable.

– Morry Akbarian
Owner and CEO, Mobility Engineering
Australia

Test report

A source of knowledge and understanding.

AFTER THE TESTS have been completed, a test report containing all the results is generated. This report is saved in two different formats.

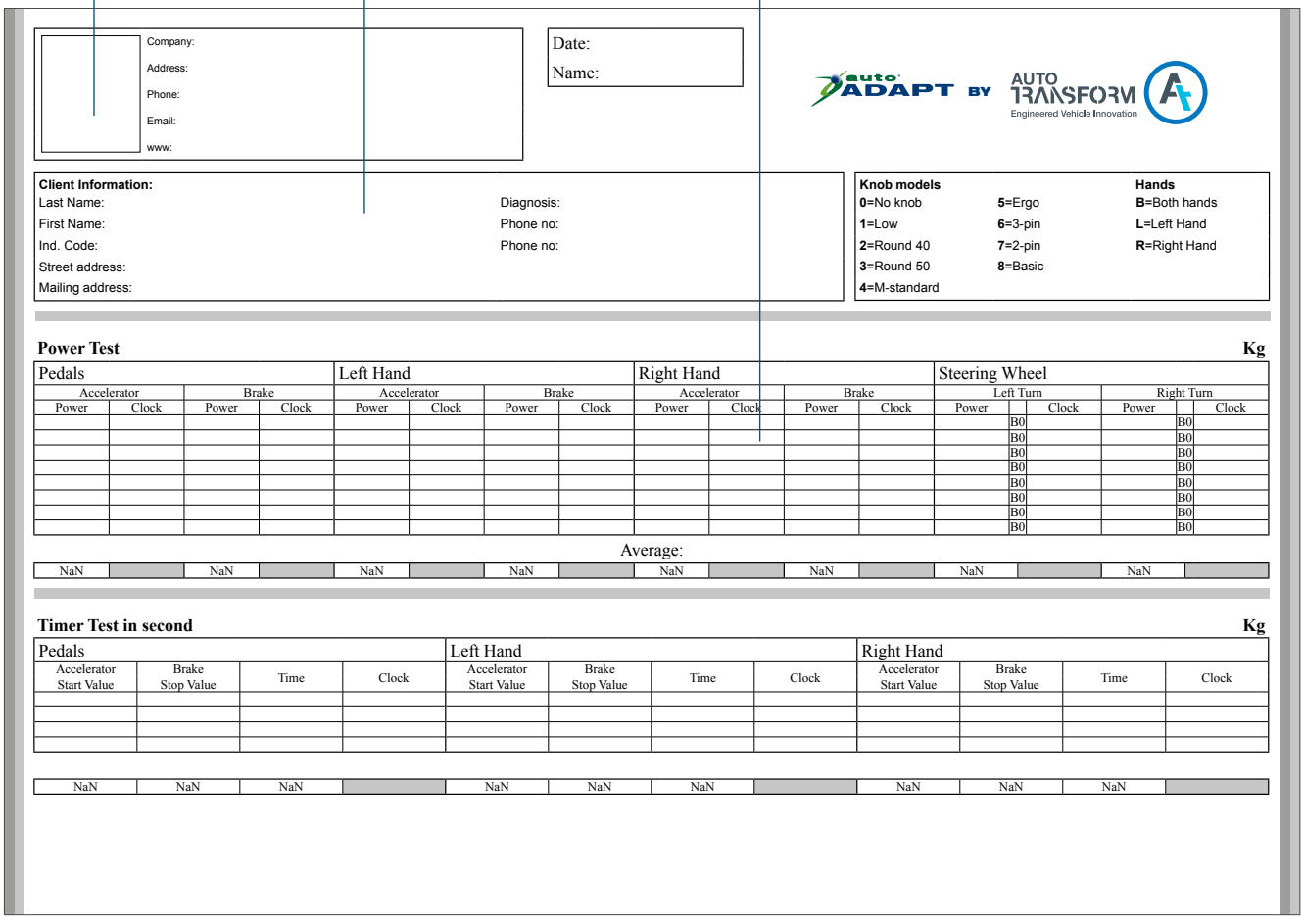
As a PDF, which presents the report in a visually straightforward way and is suitable for printing on paper. The printed report is a valuable basis for analysis and assessment when adapting a vehicle for an individual.

The alternative format, CSV, is suitable for importing information to different types of databases. This format is essential if your intention is to collect, manage and sort values.

The report also contains the relevant information and logo of the company or organisation that carried out the tests.

The report also includes the contact details of the test subject.

Structured presentation of test results.



Company:
Address:
Phone:
Email:
www:

Date:
Name:

Client Information:
Last Name:
First Name:
Ind. Code:
Street address:
Mailing address:

Diagnosis:
Phone no:
Phone no:

Knob models		Hands
0=No knob	**5**=Ergo	**B**=Both hands
1=Low	**6**=3-pin	**L**=Left Hand
2=Round 40	**7**=2-pin	**R**=Right Hand
3=Round 50	**8**=Basic	
4=M-standard		

Power Test **Kg**

Pedals				Left Hand				Right Hand				Steering Wheel			
Accelerator		Brake		Accelerator		Brake		Accelerator		Brake		Left Turn		Right Turn	
Power	Clock	Power	Clock	Power	Clock	Power	Clock	Power	Clock	Power	Clock	Power	Clock	Power	Clock
												B0		B0	
												B0		B0	
												B0		B0	
												B0		B0	
												B0		B0	
												B0		B0	
												B0		B0	
												B0		B0	
Average:															
NaN		NaN		NaN		NaN		NaN		NaN		NaN		NaN	

Timer Test in second **Kg**

Pedals				Left Hand				Right Hand			
Accelerator Start Value	Brake Stop Value	Time	Clock	Accelerator Start Value	Brake Stop Value	Time	Clock	Accelerator Start Value	Brake Stop Value	Time	Clock
NaN	NaN	NaN		NaN	NaN	NaN		NaN	NaN	NaN	

Ready for use

Everything you need in one package.

ON DELIVERY, YOU will find everything you need to launch and implement the various tests. The operator's computer is not included in the package.

- Driver Test Station, equipped with
  - hand controls, Carospeed™
  - Autoadapt 6-way base™
  - car seat, Compact seat™
  - two accelerator pedals and one brake pedal
  - wheelchair anchoring brackets, 2 pcs
  - stand for laptop and steering wheel spinners
  - steering wheel spinners, 7 pcs
  - steering wheel with adapter for spinner
  - screen, 22" widescreen
- Wheels for outdoor transportation, 2 pcs
- USB with software program
- User manual
- Calibration tool

Pedal extenders can be ordered as an option.

Moving the DTS indoors is a smooth and easy operation. When moving the station through narrow doorways, the stand for laptop and steering wheel spinners can be removed temporarily.

Length 1760 mm
Width 790 mm
Height 1350 mm
Weight 165 kg

Autoadapt's mission is to be a leading global provider of safe vehicle adaptation solutions for persons with reduced or limited mobility.

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